

Accordingly, it is respectfully submitted that in addition to the lack of teaching where robot arms have a plurality of links, as admitted by the Examiner, which is recited in independent claims 1 and 9 of the present invention, Nio et al also does not teach or suggest "an effecting end point biased with respect to a final rotational axis of said wrist and directed to said final rotational axis," as recited in independent claims 1 and 9 of the present invention.

In addition to the above points, it is respectfully submitted that contrary to the assertions made by the Examiner, for at least the reason that the apparatus in Nio et al. is a different structure that does not provide the features of the present invention, it would not have been obvious to one of ordinary skill in the art at the time of the invention to attach the wrist and the "end effecting" of Nio et al. to a well known robot arm with a plurality of links in order to facilitate moving the end effecting device. Applicants respectfully point out that in order to establish a *prima facie* case of obviousness, three basic criteria articulated in MPEP §2142 must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure." In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also MPEP section 2142 (Establishing a *prima facie* case of obviousness). Hence, it is submitted that a *prima facie* case of obviousness has not been established since none of the three prongs of the test for obviousness have been met. For example, there is simply no suggestion or motivation to modify Nio et al. in a manner as suggested in the Office action. Further, even if one of ordinary skill in the art would have been motivated to modify the apparatus of Nio et al., this hypothetical modification would not provide each of the features as recited without an impermissible hindsight use of applicant's claims to provide each of the features as recited.

For at least the above reasons, it is respectfully submitted that independent claims 1 and 9 are patentable over Nio et al., and withdrawal of this rejection and allowance of these claims are earnestly solicited.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8(a)

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on MAY 27, 2003, 2003
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Date: MAY 27, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND the following claims:

1. (TWICE AMENDED) A robot system comprising:
a movable arm including a plurality of links and a wrist connected by joints and controlled by a robot controller having a software processing function; and
a tool unit mounted on said wrist at a distal end of said movable arm, and having an effecting end point biased with respect to a final rotational axis of said wrist and directed to said final rotational axis.

9. (TWICE AMENDED) A method of machining a cylindrical workpiece with a robot system comprising a movable arm including a plurality of links and a wrist connected by joints and controlled by a robot controller having a software processing function, a tool unit mounted on said wrist at a distal end of said movable arm, and having an effecting end point biased with respect to a final rotational axis of said wrist and directed to said final rotational axis, said method comprising [the steps of]:
 - (a) arranging the workpiece so that a central axis of the workpiece is aligned with the final rotational axis of said wrist; and
 - (b) rotating said final rotational axis to perform machining on the workpiece.